Amendments to the Claims:

1.   (Currently Amended) A ~~Method in which~~ method for monitoring a composition of a polymer blend, melt, ~~and / or~~ solution or combination thereof, used to produce a polymer ~~is monitored, wherein~~ comprising:

　　　　(a) guiding the polymer blend, melt, ~~and / or~~ solution or combination thereof ~~is guided~~ through an installation volume; ~~during the production and~~

　　　　(b) withdrawing a sample gas that is formed from the polymer blend, melt, ~~and / or~~ solution or combination thereof, ~~is withdrawn~~ from the installation volume; and

　　　　(c) ~~fed~~ feeding the sample gas through a gas line connected to the installation volume and directly to a mass spectrometer ~~(28)~~, ~~which~~ wherein the mass spectrophotometer automatically outputs an analysis signal representing the composition of the sample gas, ~~characterised in that the sample gas is guided directly from the installation volume to the mass spectrometer (28) through a gas line (29) connected to the installation volume~~.

2.   (Currently Amended) ~~Method~~ The method according to Claim 1, ~~characterised in that~~ wherein a transport gas is added to the sample gas in the gas line ~~(29)~~.

3.   (Currently Amended) ~~Method~~ The method according to Claim 2, ~~characterised in that~~ wherein the transport gas ~~(57)~~ is heated.

4.   (Currently Amended) ~~Method~~ The method according to Claim 2 ~~or 3~~, ~~characterised in that~~ wherein the transport gas ~~(57)~~ is fed under pressure.

5.   (Currently Amended) ~~Method~~ The method according to ~~one of the preceding claims~~ Claim 1, ~~characterised in that~~ wherein the gas line ~~(29)~~ is heated.

6.   (Currently Amended) ~~Method~~ The method according to Claim 5, ~~characterised in that~~ wherein the gas line ~~(29)~~ is heated to at least the condensation temperature of the sample gas.

7.   (Currently Amended) ~~Method~~ The method according to Claim 5 ~~or 6, characterised in that~~ wherein the gas line (29) is heated to at least 200° C.

8.   (Currently Amended) ~~Method~~ The method according to Claim 7, ~~characterised in that~~ wherein the gas line (29) is heated to at least 290° C.

9.   (Currently Amended) ~~Method~~ The method according to ~~one of the preceding claims~~ Claim 1, ~~characterised in that~~ further comprising:

     (d) flushing the gas line ~~(29) is flushed~~ with a flushing gas ~~(58) after the conveyance of the sample gas~~.

10. (Currently Amended) ~~Method according to Claim~~ The method of claim 9, ~~characterised in that~~ wherein the flushing gas ~~(58)~~ is heated.

11. (Currently Amended) ~~Method~~ The method according to Claim 10, ~~characterised in that~~ wherein the flushing gas ~~(58)~~ is heated to a temperature of at least the condensation temperature of the sample gas.

12. (Currently Amended) ~~Method~~ The method according to ~~one of the Claims~~ Claim 9 ~~to 11, characterised in that~~ wherein ~~an oxidizing gas is used as~~ the flushing gas ~~(58)~~ is an oxidizing gas.

13. (Currently Amended) ~~Method~~ The method according to ~~one of the preceding claims characterised in that,~~ Claim 1, wherein the installation volume comprises a plurality of sampling sites and wherein the sample gas is ~~fed to the mass spectrometer (28)~~ withdrawn in step (b) from ~~various~~ the plurality of sampling sites ~~(30, 31, 32, 33, 34, 35, 36)~~ of the installation volume in an alternating manner.

14. (Currently Amended) ~~Method~~ The method according to ~~one of the preceding claims characterised in that, in a manner that allows fluids to be conducted, a multiple number~~ Claim 13, further comprising connecting the plurality of sampling sites each individually ~~(30 to 36) can each be connected~~ to the mass spectrometer ~~(28)~~ by ~~means of~~ an electronically controlled shut-off device ~~(47, 48)~~.

15. (Currently Amended) ~~Method~~ The method according to Claim 14, ~~characterised in that the connection of~~ further comprising connecting the sampling sites ~~(30 to 36)~~ to the mass spectrometer ~~(28) is generated~~ according to a predetermined adjustable clock.

16. (Currently Amended) ~~Method~~ The method according to ~~one of the preceding claims characterised in that,~~ Claim 1, wherein the polymer is produced by polycondensation.

17. (Currently Amended) ~~Method~~ The method according to ~~one of the preceding claims characterised in that,~~ Claim 1, wherein the sample gas comprises an exhaust vapour of a reactor system ~~(2, 8, 15, 18, 22) is diverted as a sample gas~~.

18. (Currently Amended) ~~Method~~ The method according to ~~one of the preceding claims characterised in that,~~ Claim 9, further comprising closing the connection between the installation volume and the gas line ~~(29) is closed when the flushing gas (58) is guided through the gas line~~ during step (d).

19. (Currently Amended) ~~Method~~ The method according to ~~one of the preceding claims characterised in that,~~ Claim 9, further comprising interrupting the connection between the gas line ~~(29)~~ and the mass spectrometer ~~(28) is interrupted when flushing gas is being guided through the gas line (29)~~ during step (d).

20. (Currently Amended) ~~Method~~ The method according to ~~one of the preceding claims characterised in that,~~ Claim 1, further comprising:

     (e) using ~~at least one reactor system (2, 8, 12, 14, 15, 17, 18, 20, 22, 25) is controlled in dependence on~~ the analysis signal of step (c) to control a reactor system.

21. (Currently Amended) ~~Automatic~~ An automatic analysis device ~~(27)~~ that is arranged in such a way that it can be built into an installation ~~(1)~~ for the production of a polymer from a polymer blend, melt, ~~and / or~~ solution or combination thereof, that is guided through an installation volume, having at least one gas line ~~(29)~~, said gas line ~~(29)~~ being developed in such a way that it can be connected to the installation

volume in a manner that allows the fluids to be conducted and can be opened and closed automatically, and ~~having~~

at least one mass spectrometer ~~(28)~~ to which a sample gas formed from the polymer blend, melt,~~ and / or~~ solution or combination thereof, can be fed through the gas line ~~(29)~~ during the production of the polymer, wherein an analysis signal that is representative for the composition of the sample gas can be outputted by the mass spectrometer ~~(28)~~.

22. (Currently Amended) ~~Automatic~~ The automatic analysis device ~~(27)~~ according to Claim 21, ~~characterised in that~~ further comprising a controller ~~(37)~~ and a shut-off device ~~(47, 48)~~ controlled by a controller are provided, wherein the gas line can be automatically released by the shut-off device ~~(47, 48)~~ depending on an activation signal from the controller ~~(37)~~.

23. (Currently Amended) ~~Automatic~~ The automatic analysis device ~~(27)~~ according to Claim 21 ~~or 22~~, ~~characterised by~~ further comprising a pumping apparatus ~~(35)~~, by means of which the sample gas can be conveyed to the mass spectrometer.

24. (Currently Amended) ~~Automatic~~ The automatic analysis device ~~(27)~~ according to ~~one of the Claims~~ Claim 21 ~~to 23~~, ~~characterised in that~~ wherein the gas line ~~(29)~~ is arranged in such a way that it can be shifted into a flushing state by means of being separated from the installation volume and having a flushing gas flow through it.

25. (Currently Amended) ~~Automatic~~ The automatic analysis device ~~(27)~~ according to ~~one of the Claims~~ Claim 21 ~~to 24~~, ~~characterised by~~ further comprising a heating apparatus ~~(63)~~, by means of which the gas line ~~(29)~~ can be heated.

26. (Currently Amended) ~~Automatic~~ The automatic analysis device ~~(27)~~ according to ~~one of the Claims~~ Claim 21 ~~to 25~~, ~~characterised in that the multiple number~~ further comprising a plurality of sampling sites ~~(30 to 36)~~, the plurality of sampling sites being distanced from one another, ~~and flow~~ flowing into ~~the~~ a shut-off device ~~(47, 48)~~, and in that by means of a controller one sampling site ~~(30 to 36)~~ at a time can be connected to the mass spectrometer via the shut-off device ~~(47, 48)~~ in a way that it allows fluids to be conducted.

27.   (Currently Amended) ~~Installation (1)~~ An installation for the production of a polymer, ~~with~~ comprising at least one reactor system ~~(2, 8, 12, 14, 15, 17, 18, 20, 22, 25)~~, ~~characterised by~~ and an automatic analysis device ~~(27)~~ according to ~~one of the preceding claims~~ Claim 21.

28.   (Currently Amended) ~~Installation (1)~~ The installation according to Claim 27, ~~characterised by~~ further comprising a controller ~~(37)~~, by means of which at least one reactor system ~~(2, 8, 12, 14, 15, 17, 18, 20, 22, 25)~~ can be controlled, depending on the analysis signal.

29.   (Currently Amended) ~~Installation (1)~~ The installation according to Claim 27 ~~or 28~~, ~~characterised in that~~ wherein the installation ~~(1)~~ is designed as a polycondensation installation.